

European and National Qualifications Frameworks – a challenge for vocational education and training in Germany

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SUMMARY

In the debate on the draft European Qualifications Framework and the possible development of a German Qualifications Framework (GQF) great interest is being shown in Germany in a qualifications framework that promises transparency and permeability and is based on competences. There has also been opposition on the basis of the fundamental principles of the German system, which has had an impact on some public statements about the EQF. The aim is to create a GQF that can be linked to the EQF, and which covers all areas of education and is geared to practical vocational capacities.

The design and implementation of such a tool raises several questions. Are the vocational principle and the acquisition of practical capacities compatible with a qualifications framework based on learning outcomes? What rules should be applied to standard-based certification of learning outcomes obtained non-formally and informally? How can credits function as a precondition for procedures for the transfer, recognition and accumulation of competences acquired? Finally, what consequences ensue for quality assurance in education and training provision?

Key words
Competence,
comparability of
qualifications,
employability,
Germany,
lifelong learning,
training system

1. Introduction

In November 2005, two opinions on the proposal for a European Qualifications Framework were delivered to the European Commission in Brussels: an 'initial German opinion' signed by the German Federal Ministry of Education and Research (BMBF) and by the Standing Conference of Ministers of Education and Cultural Affairs of the *Länder* (KMK), and an opinion from all the German employers' associations. One month later, the Commission received an opinion from the German trade unions and the Board of the Federal Institute for Vocational Education and Training, in which the Federal Government, the *Länder*, employers and trade unions discuss all important issues of (non-school-based) vocational education and training (VET). Lastly, in February 2006 a second opinion followed from the BMBF. It was obvious – for Germany the EQF constituted a challenge to which there was no quick, simple and common answer. The consultation in Germany was accompanied by several extremely critical voices, which went so far as to warn that skilled workers – the tried-and-tested model and 'showpiece' of German VET – were fundamentally threatened by the EQF (Drexel, 2005; Rauner, 2005).

In our article, we begin by explaining why there is wide-ranging interest in a qualifications framework in Germany (2). We go on to discuss opposition to a qualifications framework, which relates to the change in management mechanisms that it may involve (3); in some cases, this opposition also found expression in the German opinions (4). We then turn to questions of detail and to possible consequences of the development of a national qualifications framework (5). Finally, we list a number of research, development and testing tasks that are required (6).

2. Fundamental agreement of European and national objectives

The EQF essentially met with a positive response even at an early stage (*Überlegungen für die Konstruktion eines integrierten NQF-ECVET-Modells*, 2005) because it is primarily seen as an approach that might allow the value of German qualifications to be portrayed more appropriately than hitherto on an international scale. The German view is that previously developed classification/transparency tools are unsatisfactory or inadequate. In the 1985 European system of equivalences of vocational diplomas, levels were defined using a combination of competence and education levels, which meant that

German skilled workers, at Level 2, ranked below French holders of a school-leaving certificate qualifying them for higher education. The 2005 European Directive on the recognition of professional qualifications defined five levels by means of fields of education, duration of education and type of qualification – here, not only the journeyman or skilled worker, but even the master craftsman, is ranked at Level 2. The 1988 *International Standard Classification of Occupations* (ISCO) classifies jobs. The 1997 *International Standard Classification of Education* (ISCED) classifies levels of and participation in education. The EQF made it possible, for the first time, clearly to position vocational qualifications in relation to academic qualifications. This is also of particular interest with regard to the publications of international organisations such as OECD, which regularly refer to a comparatively low rate of academic qualifications in Germany (OECD, 2005).

Over and above transparency, and in addition to promoting transnational mobility, the EQF promises solutions to a number of problems that have also run through the debate on education in Germany for many years – promotion of participation in education, integration of general and vocational education, permeability and lifelong learning. These objectives already characterised the major debates of the early 1970s, when a strategy for the reform of the entire education system was formed into a structural plan (*Deutscher Bildungsrat*, 1970). A generation later, the concept of the qualifications framework offers a basis that is both simple and logical for – at last – considering ‘the whole’ and tying the various threads together where they end, at their outcomes. This would seem to be urgently necessary at a time when the education subsystems have become largely autonomous and, even within VET, problems of access and transition for certain target groups or at certain interfaces are being worked on as separate issues.

For example, the 16 *Länder* employ 16 different sets of criteria to regulate the possible accumulation of vocational qualifications or competences at the point of access to courses of higher education.

In one sector/occupational field, a framework was created in the shape of the IT continuing training system that covers four levels of vocational qualifications (one training level and three advanced training levels), and which facilitates access to formal qualifications via vocational experience and includes the accumulation of vocational with academic qualifications (Borch/Weißmann, 2002). The question of the extent to which this model can be transferred to other sectors is currently being examined.

The Vocational Education and Training Act (*Berufsbildungsgesetz*) of 1 April 2005 (Federal Ministry of Education and Research, BMBF, 2005) allows ad-

mission of those completing school-based learning pathways to final examinations before a chamber, thus linking qualification subsystems that have hitherto been kept strictly separate. The new Act also provided for competences acquired at school and elsewhere to be combined into a dual qualification, to avoid 'queuing'. This includes qualification modules that can be obtained prior to training.

The Act's provisions are aimed at addressing a trend that is noteworthy in Europe, namely a falling proportion of 20-24-year-olds who have completed secondary level II; this is an indicator under the Lisbon strategy (objective for 2010: 85 %). Germany now lies below the EU average, and is continuing to fall. 2002: EU 25: 76.6 %; D: 73.3 %. 2004: EU 25: 76.4 %, D: 72.5 % (European Commission, 2005). The drama inherent in this trend was underlined by the report *Bildung in Deutschland*, according to which in 2004 over 400 000 young people were in a 'transitional system' between school and training/job, in which they were acquiring no recognised vocational or academic qualification (Konsortium Bildungsberichterstattung, 2006).

Germany also lies below the EU average, well behind the Scandinavia countries, for example, according to another indicator, participation in continuing training, measured as participation in continuing training within the last four weeks and hours of continuing training per 1 000 working hours. However, the demographic trend (ageing population, immigration) makes it necessary to have greater participation and easier access to qualifications, including for career changers.

It might be possible for a national qualifications framework to play a part in facilitating and shortening the process of access to the acquisition of qualifications – firstly by creating the basis for a precise description of learning requirements, learning level and learning provision and for making them reciprocal reference points, and, secondly, by broadly separating learning from particular institutions and particular biographical time points. It is also true to say that more advice on and support for learning is required in order for this actually to lead to increased motivation and, ultimately, to increased learning and acquisition of qualifications.

3. EQF/GQF and management of education systems

In what follows, we explain why European and German Qualifications Frameworks cannot be put in place completely without problems, even if there is general agreement on them in principle. There is general agreement insofar as this involves tools for greater transparency of qualifications. The change of paradigm in the system management which might also be linked to the qualification framework, from input and process based management to output and outcome based management, constitutes a challenge for the German system (Young, 2005; Bjørnåvold and Coles, 2007 – see page 203 of this issue).

Qualifications frameworks can be understood as an element, perhaps even a key element, of a new form of management of the education system. The expansion in education in the 1960s and 1970s led to a heavy burden on national budgets in the 1980s and into the 1990s. In Germany, this came later than elsewhere, since here the majority of training places were financed by enterprises themselves. As the willingness of enterprises to provide training declined, here too more costs were devolved to the State. This trend gradually led to a transfer of efficiency standpoints to the education sector. As a result, the concept of New Public Management (NPM), which had already characterised education policy (and also health policy) in the USA and the UK, also made its appearance in continental Europe and Germany in the 1990s (Alleman-Ghionda, 2004). The concept underlying NPM is that the outcome is all. Responsibilities are redistributed – the State limits itself to stipulating strategic guidelines and to monitoring them, while educational institutions have operational freedom in achieving the objectives. In quantitative terms, state action is aimed at economic efficiency – expenditure (input) is compared with the number of qualifications/integrations achieved (output). In qualitative terms, under the new management regime State action is aimed at learning outcomes in relation to centrally set standards, with the pathways (defined by learning venues and curricular and didactic input) being secondary. In this way, the public education mandate tends to be withdrawn and there is greater scope for free competition of suppliers on the education market.

NPM is representative of neoliberal economic policy. (Hall and Soskice introduced a crucial distinction (Hall and Soskice, 2001) between coordinated market economics and liberal market economies.) The UK is an example of the latter, Germany an example of the former. Typically, these different types of economic management represent alternative qualification strategies: vocational education versus employability (Rauner, 2006). According to this view, VET strategies are rooted in coordinated market economies; on the contrary,

strategies that largely leave it up to individuals to acquire in a qualifications market competences that they believe will increase their employability, are rooted in liberal market economies.

This is where the fundamental criticism of the EQF began, as formulated in an expert opinion for the industrial trade union *Industriegewerkschaft Metall* and the services trade union *ver.di* (Drexel, 2005). In this view, the starting point for the EQF, in combination with ECVET, would be completely at odds with the German system and would compel it to change. Comprehensive vocational training in public/private partnership would be replaced by fragmentation, individualisation and commercialisation of the acquisition of competences.

What are the determining characteristics of the German VET system that are in question here? In the German system, the State and industry share responsibility – anchored in public law – for qualifying basic training of all young people and young adults. Accordingly, the acquisition of qualifications in schools, enterprises, and institutions of higher education is, for the most part, subject to detailed regulation as regards duration, learning venue, content and form. To be admitted to examinations one must normally have completed a formal study programme. In other words, the learning pathway is laid down in law. There is a clear emphasis on initial vocational training. The guiding concept is that of broad qualification for a comprehensive vocational field. Along with the State, the social partners play a key part in standardisation of qualifications; the awarding of qualifications is the responsibility of the decentralised autonomous management of ‘competent bodies’.

The problems involved in formulating a German position on the EQF are, above all, based on the principles and structure of German VET, as briefly outlined here. The critical agreement to its implementation and to the development of a national framework is the expression of a gradual blending of traditional and liberal management mechanisms.

4. Key features of the German opinions on the EQF

In its opinion of 15.11.2005 on the first draft of an EQF (¹), the Federal Ministry of Education and Research (BMBF), jointly with the Standing Conference of Ministers of Education and Cultural Affairs of the *Länder* (KMK), informed the European Commission that Germany intended to develop a national framework for vocational and general education. This plan was given concrete shape by Ministry working parties on continuing training/permeability and opening up to Europe. In its opinion on the Commission's draft in its meeting of 14.12.2005, the main committee of the Federal Institute for Vocational Education and Training, Germany's 'VET parliament', also supported the development of a qualifications framework covering all areas of education in Germany, and reaffirmed this in its meeting of 09.03.2006.

Though the emphasis varied, Federal Government, *Länder*, employers and unions were essentially in agreement on a number of key points:

- The EQF objectives of promoting transparency and mobility were welcomed. It was felt that the framework should be equally valuable for education and employment, although the employers emphasised employment.
- The eight levels appeared to be accepted in principle, although the unions would have preferred fewer levels.
- Care would have to be taken in formulating the EQF descriptors to ensure that they could be made congruent with (future) national descriptions of qualifications. This would mean working to ensure that the descriptors can reflect practical vocational ability and that there is room for school-based/academic and vocational qualifications/competences at all levels.
- The descriptors would have to be precise, easy to use, and objectively verifiable in practice, but they should not exclude any national variants.
- The definitive introduction of the EQF would have to be preceded by a phase of testing, evaluation and review in national, regional and sectoral projects.

In addition, the employers urged that the average learning time be introduced as a quantitative descriptor. The unions also wanted learning time to be taken into account, as well as the learning venue; otherwise there was a risk of qualifications being assigned in arbitrary fashion, and consequently of fragmentation.

(¹) Bundesministerium für Bildung und Forschung/Kultusministerkonferenz: Erste Stellungnahme zum ersten Entwurf eines EQR, 2005.

5. Aspects and possible consequences of putting the framework into operation

Following the consultation, preparatory work began on a GQF. In connection with both the implementation of an EQF and the development of a GQF, there are a number of questions concerning operation that need to be clarified; they are crucial for the functioning of such tools and need to be addressed in further research and development work and in test phases. Here, starting points in German VET that have already been developed on the basis of existing national needs can be used to explore the individual themes.

Competence dimensions and practical vocational capacities

In categorising learning outcomes, the current proposal for an EQF also makes a distinction between the comprehensive category 'competences' and the categories of knowledge and skills. This also corresponds to the wording of the Vocational Education and Training Act (BBiG) as amended in 2005, which lays down the imparting of knowledge, skills and – a new addition – capability of acquiring practical vocational capacities as the aim of VET. Here, the BBiG has taken account of a paradigm shift in VET in Germany, which took place with the reform of major occupational fields such as the metalworking and electrical fields as far back as the late 1980s, with orientation to practical vocational capacities. The basis for this was the concept of complete job handling (see Rauner and Grollmann, 2006).

With a concept of competence established in this way, the preconditions were created for a widespread differentiation in Germany between technical, social and personal⁽²⁾ dimensions of practical capacities. The technical dimension includes skills and knowledge, while methods and learning competence are imparted across these individual categories (see Sloane, 2004). A corresponding differentiation between the dimensions of practical capacities for the categorisation of learning outcomes emerges from the drafting of the guidelines of the BIBB Board on developing a national qualifications framework (BIBB, 27.09.2006).

Competence levels and professionalism

A number of aspects concerning the issue of the number of competence levels, which should adequately reflect both the education and employment

⁽²⁾ Here, the category 'personal' is used as a synonym of human competence. See Bader, 2000:39.

systems, are still being hotly debated. For example, if eight levels are used in the same way as in the EQF, this could lead to the learning outcomes of German dual skilled-worker qualifications being classified as either Level 3 or Level 4, which would at the very least undermine the consensus hitherto existing that all dual-training qualifications are equal (see BIBB, 01.12.2005).

Professionalism is also regarded as being at risk if it is planned to classify at the lower levels qualification learning outcomes that lie below the level of German skilled-worker qualifications. Ultimately, the classification of part-qualifications or training content in skills relevant to work might no longer relate to relatively broad, integrated job profiles, but instead to small bundles of skills (Deutscher Gewerkschaftsbund, 2005).

This presupposes, however, that a credit system as currently under discussion at European level in the form of ECVET (European Commission, 2006) is a necessary precondition for putting a qualifications framework into operation, which is not currently the case and will probably not be the case in future either. In addition, no legal basis exists in Germany for the categorisation of part-qualifications, nor is any amendment for that purpose under discussion. The debate is, rather, to be regarded as a continuation of the German debate on professionalism versus employability, which led in the 1990s, for example, to the development of open job profiles in the fields of IT and industrial business management services, with optional qualifications (see Ehrke, 2006, p. 20), which facilitate flexible and needs-based qualification.

Descriptors

Within qualifications frameworks, descriptors are general, abstract descriptions of learning outcomes. They serve to create reference points between national and sectoral qualifications and qualifications frameworks.

The German VET system faces the challenge of developing for a GQF descriptors that take account of the imparting of practical vocational capacities acquired in the dual system and which, at the same time, facilitate a comparison with learning outcomes from, for example, full-time and higher-education provision. In the current debate, this is not necessarily seen as an irreconcilable contradiction of domain- or context-specific acquisition of practical capacities, as becomes clear from interdisciplinary and key qualifications (see Ehrke, 2006). Here, it becomes apparent that there is a need for comparative empirical research, e.g. in selected fields of qualifications, as is currently under discussion in the BIBB. Another challenge arises for the development of descriptors with regard to the categorisation of skilled-worker qualifications as already ex-

plained, namely how to understand competence, the dimensions derived from this, and the number of levels involved.

Certification of formal, non-formal and informal learning outcomes

The EQF is designed to be a reference framework for national certification systems, and this also has an impact on the debate on reforming certification of qualifications as well as non-formal and informal competences. It remains unclear what rules should be applied to standard-based certification of learning outcomes obtained non-formally and informally.

Attempts have been made for some time using traditional labour-market and education certificates to record, in addition to input aspects, all-round competences (social, personal and learning competences and problem-solving ability) (Clement, 2006). Ultimately, it remains to be seen how, in the development of rules for accumulation, Germany's full qualifications and public-law control of certification of units of recognised qualifications can be preserved (Hanf, 2006).

The German IT continuing training system offers design principles for the development of permeable certification systems, which are also of relevance to qualifications frameworks. For example, it is output-oriented and geared to competences acquired in enterprise and/or in practice (work-process orientation). If appropriate, recognition of informal learning can also take place within the framework of a modularised certification system. In addition, it is designed to record learning outcomes through credits, and hence is also potentially compatible with other sectors of education both within and outside Germany (Tutschner and Wittig, 2006, pp. 217 ff.)

Intersectoral approach

It is not only VET that faces the question of which criteria and procedures should be used to establish equivalences as a precondition for recognition and/or accumulation of competences acquired. The debate between sectors of education on this has taken off, and common trends have become apparent as regards defining the objectives of teaching methods not only in general education, but also in VET and higher education.

For example, in schools providing a general education examinations are application-based, in line with the education standards (*Kultusministerkonferenz*, 2004). Similarly, in addition to knowledge, the higher-education qualifications framework (*Kultusministerkonferenz*, 2005) cites ability in the sense of application of knowledge as a fundamental dimension of competence. Lastly, with reference to higher education, the Federal Ministry of Education and Re-

search (BMBF) speaks of the acquisition of vocational competence as an educational objective, and is currently supporting, in a programme for recognition of vocational competences in programmes of higher education (ANKOM, 2005-7), experiments involving the development of appropriate starting points for tools.

Credits

Credits are deemed to be suitable indicators for describing competences, and are essentially regarded as feasible tools for the recognition or accumulation of qualifications obtained. The European Council's Maastricht Communiqué of December 2004 provides for the development of the EQF and of a European accumulation system for VET (European Credit Transfer System for VET – ECVET). The development and introduction of a credit system across fields of education and national borders would promote the permeability of qualifications between vocational and general education, including higher education, alongside other ways of creating transparency with new quality. German employers (*Kuratorium der Deutschen Wirtschaft für Berufsbildung*, 2005) suggest using credits as quantitative tools for describing learning outcomes.

In work on developing a GQF, however, there must be clarification of how the awarding of credits for segments of programmes of vocational education to be defined can also take full account of the practical vocational capacities acquired as part of the same process. The issue of the compatibility of a VET-based credit system (ECVET) with the version of a European Credit Transfer System (ECTS II) geared to quality and currently under development for the European higher education sector ⁽³⁾ also remains to be clarified. Useful findings on this point are also expected from the BMBF programme already mentioned, the programme for recognition of vocational competences in programmes of higher education (ANKOM).

Orientation to competences and quality assurance of qualifications

In order to clarify the starting situation with regard to the degree of orientation to competences in State-regulated VET, in a survey of 24 German job profiles in all areas of dual vocational training, a BMBF expert opinion (Breuer, 2005) comes to the following conclusion. Neither the underlying understanding of competence in each case nor the wording of the learning objectives and

⁽³⁾ European Council. Maastricht Communiqué on the Future Priorities of Enhanced European Cooperation in Vocational Education and Training (Review of the Copenhagen Declaration of 30 November 2002), 2004.

examination requirements is clear or uniform. Reformed occupations such as *Industriekaufmann* [commercial employee in industry] and the occupations in the metalworking and electrical sectors are formulated primarily as competence-related both in the statutory instrument and in the framework curricula. Accordingly, the expert opinion recommends taking the example of recent and reformed occupations as a starting point in further research and development work on competence-based job profiles and competence standards of the kind the BIBB is currently starting up.

Thus the debate on the possible effects of a competence-based qualification structure on quality assurance (e.g. examination/test methods and procedures) is only just beginning in Germany.

In quality assurance, the EQF focuses only on output/outcomes (learning outcomes, examinations and usability). Since Member States retain responsibility for quality assurance systems and tools, in developing the GQF, in addition to learning outcomes (?) greater account must be taken of the two quality fields input (framework conditions) and process (training concept and design) (see Ehrke, 2006).

6. Outlook

The future GQF will primarily fulfil the function of a translation tool for qualifications based on learning outcomes, which are categorised as bundles of learning outcomes via national qualifications frameworks and systems. In this way, it will support transparency, permeability and mobility. An all-embracing national qualifications framework can, in addition, help to promote education policy's macro-objectives of lifelong learning and employability.

Even if, like the EQF, the GQF is conceived in Germany not as a statutory provision but as a tool offered to user groups, its function will go beyond that of a tool for transparency, thanks to its approach alone, which embraces all institutions and sectors. Accordingly, the BIBB Board's working party for a GQF (BIBB, 2006) also included quality assurance and development, which is aimed at optimising and systematising qualifications, in its list of objectives.

In future research and development and in test phases, one aim will be to effect continuous exchanges with experts and players from neighbouring countries with similar dual structures⁽⁴⁾. Selected occupational fields could

⁽⁴⁾ Under the overall leadership of Germany, these countries have come together with Finland and Bulgaria under the Leonardo programme for a joint project (TransEQRframe) on implementation and testing of an EQF at the level of national education systems.

be taken as models for testing learning-outcomes-based description and classification of qualifications as a tool for communication between Member States' education and employment systems.

Thanks to the above-mentioned approaches which have already been adopted in individual parts of the German education system, the conditions are favourable for the development of a GQF in Germany, as a complementary response to an EQF and also as a tool for taking the national educational debate further, for example on the permeability of qualifications. A GQF could expedite these developments in the interests of all user groups.

Bibliography

- Allemann-Ghionda, Ch. *Einführung in die vergleichende Erziehungswissenschaft*. Weinheim: Beltz, 2004.
- Borch, H.; Weißmann, H. (eds.). *IT-Weiterbildung hat Niveau(s): das neue IT-Weiterbildungssystem für Facharbeiter und Seiteneinsteiger*. Bielefeld: Bertelsmann, 2002.
- Breuer, K. *Handlungskompetenz in Ausbildungsordnungen und KMK-Rahmenlehrplänen: Bericht zum Projekt*. Revised and expanded version. Bonn: BMBF, 2005.
- BIBB, Federal Institute for Vocational Education and Training. *EQR Prüfbericht für den Hauptausschuss vom 01.12.2005*. Bonn: BIBB, 2005 [internal document].
- BIBB, Federal Institute for Vocational Education and Training. *Stellungnahme des Hauptausschusses (3/2005) vom 14.12.2005 zum ersten Entwurf der Europäischen Kommission für einen Europäischen Qualifikationsrahmen vom 08.07.2005*. Bonn: BIBB, 2005 [internal document].
- BIBB, Federal Institute for Vocational Education and Training. *Prüfbericht zu einem NQR für den Hauptausschuss (1/2006) vom 24.02.2006*. Bonn: BIBB, 2006 [internal document].
- BIBB, Federal Institute for Vocational Education and Training – Arbeitsgruppe zur Erarbeitung von Leitlinien zur Gestaltung eines NQR aus der Sicht der Berufsbildung. *Protokoll der Sitzung vom 27.09.2006*. Bonn: BIBB, 2006 [internal document].
- BMBF, Federal Ministry of Education and Research. Berufsbildungsgesetz vom 23.03.2005. In *Bundesgesetzblatt*, pp. 931 ff. Available online: http://www.gesetze-im-internet.de/bundesrecht/bbig_2005/gesamt.pdf [cited 18.4.2007].

- BMBF, Federal Ministry of Education and Research; Kultusministerkonferenz. *Erste Stellungnahme vom 15.11. 2005 zum ersten Entwurf der Europäischen Kommission für einen Europäischen Qualifikationsrahmen vom 08.07.2005.* Bonn: BIBB, 2005 [internal document]. Clement, U. *Der Europäische Qualifikationsrahmen: mögliche Konsequenzen für Deutschland.* Available online: https://kobra.bibliothek.uni-kassel.de/bitstream/urn:nbn:de:hebis:34-2007021217146/4/20060309_clement_text.pdf [cited 18.4.2007].
- Drexel, I. *Das Duale System und Europa: ein Gutachten im Auftrag von ver.di und IG-Metall.* Berlin: ver.di, 2005. Available online: http://www.igmetall-wap.de/publicdownload/Gutachten_Drexel.pdf [cited 18.4.2007].
- Deutscher Bildungsrat. *Strukturplan für das Bildungswesen: Empfehlungen der Bildungskommission.* Stuttgart: Klett, 1970.
- Deutscher Gewerkschaftsbund. *Stellungnahme des Deutschen Gewerkschaftsbundes (DGB) zum Konsultationsdokument "Der Europäische Qualifikationsrahmen: ein Transparenz-Instrument zur Förderung von Mobilität und Durchlässigkeit".* Berlin: DGB, 2006. Available online: http://www.dgb.de/themen/themen_a_z/abisz_doks/e/europ_qualifikationsrahmen.pdf [cited 18.4.2007].
- Ehrke, M. Der Europäische Qualifikationsrahmen: eine Herausforderung für die Gewerkschaften. In *Berufsbildung in Wissenschaft und Praxis*, 2006, No 2, pp. 18-24.
- European Commission. *Towards a European Qualifications Framework for Lifelong Learning.* Brussels: European Commission, 2005 (SEK (2005) 957). Available online: http://ec.europa.eu/education/policies/2010/doc/consultation_eqf_en.pdf [cited 18.4.2007].
- European Commission. *European Credit System for Vocational Education and Training (ECVET). A system for the transfer, accumulation and recognition of learning outcomes in Europe.* Brussels: European Commission, 2006 (SEK(2006) 1431). Available online: http://ec.europa.eu/education/ecvt/work_en.pdf [cited 18.4.2007].
- European Commission. *Proposal for a Recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework for lifelong learning.* Brussels: European Commission, 2006 (COM(2006) 479 final). Available online: http://ec.europa.eu/education/policies/educ/eqf/com_2006_0479_en.pdf [cited 18.4.2007].
- European Commission. *Progress towards the Lisbon objectives in education and training: 2005 report.* Brussels: European Commission, 2005 (SEC(2005) 419). Available online: <http://ec.europa.eu/education/policies/2010/doc/progressreport05.pdf> [cited 18.4.2007].

- European Council. *Maastricht Communiqué on the Future Priorities of Enhanced European Cooperation in Vocational Education and Training (Review of the Copenhagen Declaration of 30 November 2002)*. Brussels: European Council, 2004. Available online: http://ec.europa.eu/education/news/ip/docs/maastricht_com_en.pdf [cited 18.4.2007].
- Hall, P.; Soskice, D. *Varieties of capitalism: the institutional foundations of comparative advantage*. New York: Oxford University Press, 2001.
- Hanf, G. Der Europäische Qualifikationsrahmen: Ziele, Gestalt, Verfahren. In Grollmann, P.; Spöttl, G.; Rauner, F. *Europäisierung Beruflicher Bildung: eine Gestaltungsaufgabe*, 2006, pp. 53-64.
- Hanf, G.; Rein, V. *Auf dem Weg zu einem Nationalen Qualifikationsrahmen: Überlegungen aus der Perspektive der Berufsbildung*. Bonn: BIBB, 2006. Available online: <http://www.bibb.de/de/25722.htm> [cited 18.4.2007].
- Konsortium Bildungsberichterstattung. *Bildung in Deutschland: ein indikatorenstützter Bericht mit einer Analyse zu Bildung und Migration*. Bielefeld: Bertelsmann, 2006. Available online: <http://www.bildungsbericht.de/daten/gesamtbericht.pdf> [cited 18.4.2007].
- Kultusministerkonferenz. *Handreichung für die Erarbeitung von Rahmenlehrplänen der Kultusministerkonferenz (KMK) für den berufsbezogenen Unterricht in der Berufsschule und ihre Abstimmung mit Ausbildungsordnungen des Bundes für anerkannte Ausbildungsberufe*. Bonn: KMK, 2004. Available online: <http://www.kmk.org/doc/publ/handreich.pdf> [cited 18.4.2007].
- Kultusministerkonferenz. *Bildungsstandards der Kultusministerkonferenz*. Bonn: KMK, 2004.
- Kultusministerkonferenz. *Qualifikationsrahmen für deutsche Hochschulabschlüsse*. Bonn: KMK, 2005. Available online: http://www.kmk.org/doc/beschl/BS_050421_Qualifikationsrahmen_AS_Ka.pdf [cited 18.4.2007].
- Kuratorium der Deutschen Wirtschaft für Berufsbildung. *Berufliche Bildung für Europa: Europäischer Qualifikationsrahmen (EQF) und Leistungspunktesystem (ECVET)*. Bonn: KWB, 2005. Available online: http://www.kwb-berufsbildung.de/pdf/2005_Positionspapier_EQF_ECVET.pdf [cited 18.4.2007].
- OECD. *Education at a glance*. Paris: OECD, 2005.
- Rauner, F. Berufliche Bildung: die europäische Perspektive. In Grollmann, P.; Spöttl, G.; Rauner, F. *Europäisierung Beruflicher Bildung: eine Gestaltungsaufgabe*, 2006, pp. 127-153.
- Rauner, F., Grollmann, P. Berufliche Kompetenz als Maßgabe für einen europäischen Bildungsraum: Anmerkungen zu einem europäischen Quali-

- fikationsrahmen EQR. In Grollmann, P.; Spöttl, G.; Rauner, F. *Europäisierung Beruflicher Bildung: eine Gestaltungsaufgabe*, 2006, pp. 121-126.
- Sloane, P.F.E. Betriebspädagogik. In Gaugler, E.; Weber, W. *Handwörterbuch des Personalwesens*, 2004, p. 576.
- Tutschner, R.; Wittig, W. IT-Weiterbildung und Europäisierung: was man vom IT-Weiterbildungssystem für eine Europäisierung lernen kann. In Grollmann, P.; Spöttl, G.; Rauner, F. *Europäisierung Beruflicher Bildung: eine Gestaltungsaufgabe*, 2006, pp. 199-221.
- Young, M. *National qualifications frameworks: their feasibility for effective implementation in developing countries*. ILO: Geneva, 2005 (Skills working paper; 22). Available online: <http://www.ilo.org/public/english/employment/skills/download/wp22young.pdf> [cited 18.4.2007].
- Zentralverband des deutschen Handwerks. *Überlegungen für die Konstruktion eines integrierten NQF-ECVET-Modells*. Berlin: ZDH, 2005.